KARNATAKA TEST HOUSE PVT LTD.

MATERIAL TESTING LABORATORY

NABL Accredited Laboratory as per ISO/IEC 17025

Report No. : KTH/C.AGG/1188-1887/2013-2014 **Date: 11.09.2013**

TEST REPORT ON AGGREGATE
(Coarse Aggregate)

Name of the Customer* : **The Assistant Executive Engineer,**
Shettyhalli Sub Division,
BBMP, Dasarahalli Zone.

Name of the Project* : Construction of RCC Drain at Vishal Public School, in Ward No.13, in Shettyhalli Sub Division.

Name of Contractor* : Mr.R.Suresh, Bangalore.

Source of Sample : Supplied by the Contractor.

Sample Received on : 06.09.2013.

Technical Reference : IS : 2386 Part I to VIII– 1963 (Reaffirmed-2002), IS : 383 – 1970.

Sieve Analysis of Coarse Aggregate - 40mm & down size

Sl. No.	Sieve size mm	% Passing	IS : 383-1970 Stipulations		Remarks
			Single Size	Graded Size	
1	63	100	100	100	Sample confirms to Single Size for IS: Stipulation of 40mm size Aggregate
2	40	85.9	85 to 100	95 to 100	
3	20	11.8	0 to 20	30 to 70	
4	12.5	-	0 to 20	-	
5	10	-	0 to 5	10 to 35	
6	4.75	-	-	0 to 5	

Sl. No.	Test Conducted	Identification mm	Results	IS : 383 – 1970 Stipulations
1	Flakiness Index (%)	40	11.91	Not specified
2	Elongation Index (%)	40	14.87	Not specified
3	Impact Value (%)	40	23.69	Shall not be more than 45% for Concrete and 30% for Wearing surfaces, such as runways, roads and pavements.

* As furnished by the Customer

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ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C)
TECHNICAL MANAGER

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MATERIAL TESTING LABORATORY

NABL Accredited Laboratory as per ISO/IEC 17025

NABL Accredited Lab Certificate No.T-0991

Report No. : KTH/C.AGG/1188-1887a/2013-2014 **Date: 11.09.2013**

TEST REPORT ON AGGREGATE
(Coarse Aggregate)

Name of the Customer* : **The Assistant Executive Engineer,**
Shettyhalli Sub Division,
BBMP, Dasarahalli Zone.

Name of the Project* : Construction of RCC Drain at Vishal Public School, in Ward No.13, in Shettyhalli Sub Division.

Name of Contractor* : Mr.R.Suresh, Bangalore.

Source of Sample : Supplied by the Contractor.

Sample Received on : 06.09.2013.

Technical Reference : IS : 2386 Part I to VIII– 1963 (Reaffirmed-2002), IS : 383 – 1970.

Sieve Analysis of Coarse Aggregate - 20mm

Sl. No.	Sieve size mm	% Passing	IS : 383-1970 Stipulations		Remarks
			Single Size	Graded Size	
1	40	100	100	100	Sample confirms to Single size of IS: Stipulation of 20mm size Aggregate
2	20	85.6	85 to 100	95 to 100	
3	16	38.4	-	-	
4	10	6.1	0 to 20	25 to 55	
5	4.75	-	0 to 5	0 to 10	

Sl. No.	Test Conducted	Identification mm	Results %	IS : 383 – 1970 Stipulations
1	Flakiness Index (%)	20	11.73	Not specified
2	Elongation Index (%)	20	15.21	Not specified
3	Crushing Value (%)	20	22.64	Shall not be more than 45% for Concrete and 30% for Wearing surfaces, such as runways, roads and pavements.

* As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C)
TECHNICAL MANAGER

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Report No. : KTH/F.AGG/1188-1888/2013-2014 **Date: 11.09.2013**

TEST REPORT ON AGGREGATE
(Fine Aggregate)

Name of the Customer* : **The Assistant Executive Engineer,**
Shettyhalli Sub Division,
BBMP, Dasarahalli Zone.

Name of the Project* : Construction of RCC Drain at Vishal Public School, in Ward No.13, in Shettyhalli Sub Division.

Name of Contractor* : Mr.R.Suresh, Bangalore.

Source of Sample : Supplied by the Contractor.

Sample Received on : 06.09.2013.

Technical Reference : IS : 2386 Part I to VIII– 1963 (Reaffirmed-2002), IS : 383 – 1970.

Sieve Analysis of Fine Aggregate (River Sand)

Sl. No.	Sieve size mm	% Passing	IS : 383 – 1970 Specification				Remarks
			% passing for Zone I	% passing for Zone II	% passing for Zone III	% Passing for Zone IV	
1	10	100	100	100	100	100	Falls in Zone –II as per table 4 of IS-383 – 1970.
2	4.75	96.8	90 – 100	90 – 100	90 – 100	95 - 100	
3	2.36	87.1	60 – 95	75 – 100	85 – 100	95 - 100	
4	1.18	71.9	30 – 70	55 – 90	75 – 100	90 - 100	
5	0.600	39.2	15 – 34	35 – 59	60 – 79	80 - 100	
6	0.300	16.1	5 – 20	8 – 30	12 – 40	15 to 50	
7	0.150	1.8	0 – 10	0 – 10	0 – 10	0 to 15	

Sl. No.	Test Conducted	Results	IS : 383 – 1970 Stipulations
1.	Silt Content (%)	2.32	-

* As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C)
TECHNICAL MANAGER

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Report No.: KTH/ST/1188-1889/2013-2014 **Date: 11.09.2013**

PHYSICAL TEST REPORT ON STEEL BARS

Name of the Customer* : **The Assistant Executive Engineer,**
Shettyhalli Sub Division,
BBMP, Dasarahalli Zone.

Name of the Project* : Construction of RCC Drain at Vishal Public School, in Ward No.13, in Shettyhalli Sub Division.

Name of Contractor* : Mr.R.Suresh, Bangalore.

Source of Sample : Supplied by the Contractor.

Sample Received on : 06.09.2013.

Nature of Sample* : Reinforcement steel – 8mm & 12mm.

Technical Reference : Tensile IS: 1786 – 2008 & IS: 1608–1995 (Reaffirmed–2000)
Bend & Re-bend IS: 1786 – 2008 & IS: 1599 - 1985 (Reaffirmed–2000)

Grade of Steel* : Fe-500.

TENSILE TEST :

Dia (mm)	8	12	Limits as per IS : 1786-2008, Gr. Fe 500
Weight / unit length (kg/m)	0.384	0.854	8mm – 0.367 Min 12mm – 0.844 Min
Yield Stress (N/mm^2)	542.16	534.67	500 Min
Tensile Strength (N/mm^2)	597.28	601.24	8% More than actual 0.2% proof stress but not less than 545 N/mm^2
% Elongation (on 5.65 $\sqrt{A}$G.L)	20.5	19.5	12.5 Min.

BEND TEST:

Sl. No.	*Dia (mm)*	*Mandrel diameter*	*Observations*
1.	8	4 dia	No cracks observed. Passes the test.
2.	12	4 dia	No cracks observed. Passes the test.

REBEND TEST:

Sl. No.	*Dia (mm)*	*Mandrel diameter*	*Observations*
1.	8	5 dia	No cracks observed. Passes the test
2.	12	7 dia	No cracks observed. Passes the test.

As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C)
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Report No. : KTH/ CEMENT /1188-1890/2013-2014 **Date: 16.09.2013**

PHYSICAL TEST REPORT ON CEMENT

Interim 3 & 7 days

Name of the Customer*	:	**The Assistant Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
Name of the Project*	:	Construction of RCC Drain at Vishal Public School, in Ward No.13 in Shettyhalli Sub Division.
Name of Contractor*	:	Mr.R.Suresh, Bangalore.
Source of Sample	:	Supplied by the Contractor.
Type of Cement*	:	Ordinary Portland cement (OPC)
Brand of Cement*	:	Zuari 53 Grade.
Sample Received on	:	06.09.2013
Period of Test	:	09.09.2013 to 16.09.2013
Technical Reference	:	IS: 4031(Part I–VI) 1988 (Reaffirmed–2000) & IS: 12269-1987.

Sl. No.	Test Conducted	Results	IS : 12269-1987 Stipulation	Remarks
1	Normal consistency	1.00 %	Not specified	-
2	Initial setting time	162 minutes	Shall not be less than 30 minutes	P
3	Final setting time	259 minutes	Shall not be more than 600 minutes	P
4	Compressive strength (Average of three results) a. 72 ± 1h (3 days) b.168 ± 2h (7 days) c. 672 ± 4h (28 days)	 28.63 MPa 39.54 MPa T.T.C	 Shall not be less than 27.0 MPa Shall not be less than 37.0 MPa Shall not be less than 53.0 MPa	 P P -
5	Fineness (By Blaine's air permeability method)	316.33 m^2/kg	Shall not be less than 225 m^2/kg	P
6	Soundness (Le-chatlier's method)	1.10 mm	Shall not be more than 10 mm	P

P: Passes IS requirement F: Fails IS requirement T.T.C: Test To be Conducted.

*As furnished by the Customer

For KARNATAKA TEST HOUSE PVT. LTD.

(SREENIVASA.C.)
TECHNICAL MANAGER

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Report No. : KTH/CORE/1188-1891/2013-2014 **Date: 11.09.2013**

TEST REPORT ON PRECAST CONCRETE SLAB

To,

The Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Dasarahalli Zone.

Source of Sample : Supplied by the Contractor.
Name of Project* : Construction of RCC Drain at Vishal Public School, in Ward No.13, in Shettyhalli Sub Division.
Name of Contractor* : Mr.R.Suresh, Bangalore.
Sample Identification*: Slab Size – (915x610x100)mm
Sample Received on : 06.09.2013.
Technical Reference : IS : 456 – 2000, IS: 516 – 1959 (Reaffirmed in 1999) and SP 24-1983

Sl. No.	Core length ** (l) (mm)	Core Dia (d) (mm)	Core Wt.** (Kg.)	Failure Load (KN)	Core Comp. Strength (N/mm^2)	Corrected Cube Comp. Strength (N/mm2) • (Dia <100mm	l/d Ratio	Correction factor for (l/d) Ratio◆	Corrected Cyl. Comp. Strength (N/mm^2)	Equivalent Cube Comp. Strength◆◆ (N/mm^2)
1.	105	66.5	0.752	35.2	10.14	10.95	1.579	0.945	10.35	12.94

** Core length / Weight after trimming.
*As furnished by the Customer.
◆ For l/d ratio, correction factors are as per IS: 516 – 1959 (Reaffirmed in 1999)
◆◆ Equivalent cube compressive strength = 1.25 x corrected cylindrical compressive strength as per IS: 516 – 1959 Clause 5.6.1 (Reaffirmed in 1999).
•After applying correction factor for diameter of core which is less than 100mm (i.e. strength of core x 1.08) as per SP 24-1983, Clause 16.3.2.

Note : As per IS 456-2000, clause 17.4.3, Concrete in the member represented by a core test shall be considered acceptable if the average equivalent cube strength of the cores is equal to at least 85 percent of the cube strength of the grade of concrete specified for the corresponding age and no individual core has a strength less than 75 percent.

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C.)
TECHNICAL MANAGER.

[redacted]

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Report No. : KTH/CT/1188-1892/2013-2014 **Date: 07.09.2013**

TEST REPORT ON CONCRETE CUBES

To,

The Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Dasarahalli Zone.

Name of Project* : Construction of RCC Drain at Vishal Public School, in Ward No.13, in Shettyhalli Sub Division.

Sample Received on : Mr.R.Suresh, Bangalore.

Sample Received on : 06.09.2013

Compressive Strength test as per IS: 516-1959 (Reaffirmed 1999) has been conducted on the concrete cube specimens, supplied by the Customer and the results are tabulated here below:

Dimension of Specimen: 150mmx150mmx150mm

Sl. No	Cubes pertaining to the concrete cast at*(Details of structural member identification)	Grade of Concrete*	Date of casting*	Date of Testing	Age of Concrete on the date of test**	Contact area (mm^2)	Weight of Specimen (Kg)	Load in KN	Compressive Strength in N/mm^2
1.	Drain Wall	M_{20}	30.08.2013	06.09.2013	7 days	22500	8.120	321	14.27
2.		"	"	"	"	"	8.090	313	13.91
3.		"	"	"	"	"	8.100	334	14.84

1 N/Sq.mm = 10Kg/Sq.cm.(Approx.)
*As Furnished by the Customer
**Based on the data furnished by the Customer
Note: A minimum of three cube specimens shall be supplied for testing as per IS:516-1959.

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for **KARNATAKA TEST HOUSE PVT. LTD.**

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